



**United States Environmental Protection Agency  
Region 9 Laboratory**

**1337 S. 46th Street Building 201  
Richmond, CA 94804**

**Subject: Analytical Testing Results - Project R33911  
SDG: 12030A**

**From: Brenda Bettencourt, Director  
EPA Region 9 Laboratory  
MTS-2**

**To: Richard Fetzer  
US EPA Region 3, Eastern Response Branch  
3HS31**

# Revised Report

Attached are the results from the analysis of samples from the **Dimock Residential Groundwater** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Eugenia McNaughton at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

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**Analyses included in this report:**

Dissolved Hydrocarbon Gases by GC



United States Environmental Protection Agency  
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Phone:(510) 412-2300 Fax:(510) 412-2302

# Revised Report

**Project Manager:** Richard Fetzner  
**Project Number:** R33911  
**Project:** Dimock Residential Groundwater

**US EPA Region 3, Eastern Response Branch**  
**100 Gypsum Road**  
**Stroudsburg PA, 18360**

**SDG:** 12030A  
**Reported:** 02/10/12 13:01

## ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
FB04	1201034-01	Water	01/26/12 09:13	01/30/12 09:23
HW05	1201034-02	Water	01/26/12 11:35	01/30/12 09:23
HW06	1201034-03	Water	01/26/12 15:30	01/30/12 09:23
HW12	1201034-04	Water	01/26/12 13:23	01/30/12 09:23
HW14-P	1201034-05	Water	01/26/12 19:15	01/30/12 09:23
HW14	1201034-06	Water	01/26/12 17:13	01/30/12 09:23
TB04	1201034-07	Water	01/26/12 08:31	01/30/12 09:23
TB05	1201034-08	Water	01/26/12 08:34	01/30/12 09:23
FB05	1201034-09	Water	01/27/12 09:40	01/30/12 09:23
HW01	1201034-10	Water	01/25/12 16:31	01/30/12 09:23
HW24-P	1201034-11	Water	01/27/12 13:18	01/30/12 09:23
TB02	1201034-12	Water	01/25/12 07:55	01/30/12 09:23
TB03	1201034-13	Water	01/25/12 08:00	01/30/12 09:23
TB07	1201034-14	Water	01/25/12 08:00	01/30/12 09:23
HW17	1201034-15	Water	01/27/12 11:40	01/30/12 09:23
HW24	1201034-16	Water	01/27/12 12:09	01/30/12 09:23
TB06	1201034-17	Water	01/27/12 08:05	01/30/12 09:23

### SDG ID 12030A

This is a revised report. This report replaces report 1201034 FINAL 02 03 12 1518. The chains of custody associated with these samples did not include a request for dissolved methane, ethane and ethene (RSK-175) for sample HW01 and samples vials for RSK-175 were not provided for this sample. At the request of the project team, the spare HCl preserved VOA vial from the TPH-purgeable hydrocarbons was used to perform RSK-175 analysis on 2/8/12. This revised report includes results sample HW01.

Samples 1201034-12 and -13: Sample tag info and COC info disagreed. Used tag info for log in.

RSK-175: A small amount of methane contamination (0.7 ug/L) was found in the method blanks. The amount found was less than the quantitation limit. Samples with concentrations less than 5 times the amount in the blank were flagged as estimated. MS/MSD was not run due to insufficient sample volume.

### Work Order(s)

**1201034**



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## Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
<b>Lab ID: 1201034-01</b>							<b>Water - Sampled: 01/26/12 09:13</b>		
<b>Sample ID: FB04</b>							<b>Dissolved Gases by RSK-175</b>		
Methane		2.1	B1, J	1.2	ug/L	B2A0080	01/31/12	01/31/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		111 %		66.4-153%		"	"	"	
<b>Lab ID: 1201034-02</b>							<b>Water - Sampled: 01/26/12 11:35</b>		
<b>Sample ID: HW05</b>							<b>Dissolved Gases by RSK-175</b>		
Methane	RE1	2,000		15	ug/L	B2B0006	02/01/12	02/01/12	RSK-175/SOP325
Ethane		11		1.2	"	B2A0080	01/31/12	01/31/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		104 %		66.4-153%		"	"	"	
<i>Surrogate: Acetylene</i>	RE1	111 %		66.4-153%		B2B0006	02/01/12	02/01/12	
<b>Lab ID: 1201034-03</b>							<b>Water - Sampled: 01/26/12 15:30</b>		
<b>Sample ID: HW06</b>							<b>Dissolved Gases by RSK-175</b>		
Methane	RE1	23,000		150	ug/L	B2B0006	02/01/12	02/01/12	RSK-175/SOP325
Ethane	RE1	820		150	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	B2A0080	01/31/12	01/31/12	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		103 %		66.4-153%		"	"	"	
<i>Surrogate: Acetylene</i>	RE1	113 %		66.4-153%		B2B0006	02/01/12	02/01/12	
<b>Lab ID: 1201034-04</b>							<b>Water - Sampled: 01/26/12 13:23</b>		
<b>Sample ID: HW12</b>							<b>Dissolved Gases by RSK-175</b>		
Methane	RE2	52,000		640	ug/L	B2B0006	02/01/12	02/01/12	RSK-175/SOP325
Ethane	RE1	2,000		390	"	"	"	02/01/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	B2A0080	01/31/12	01/31/12	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		102 %		66.4-153%		"	"	"	
<i>Surrogate: Acetylene</i>	RE1	111 %		66.4-153%		B2B0006	02/01/12	02/01/12	
<i>Surrogate: Acetylene</i>	RE2	113 %		66.4-153%		"	"	02/01/12	
<b>Lab ID: 1201034-05</b>							<b>Water - Sampled: 01/26/12 19:15</b>		
<b>Sample ID: HW14-P</b>							<b>Dissolved Gases by RSK-175</b>		
Methane		49		1.2	ug/L	B2A0080	01/31/12	01/31/12	RSK-175/SOP325
Ethane		1.5		1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		114 %		66.4-153%		"	"	"	
<b>Lab ID: 1201034-06</b>							<b>Water - Sampled: 01/26/12 17:13</b>		
<b>Sample ID: HW14</b>							<b>Dissolved Gases by RSK-175</b>		
Methane	RE1	3,800		28	ug/L	B2B0006	02/01/12	02/01/12	RSK-175/SOP325
Ethane		29		1.2	"	B2A0080	01/31/12	01/31/12	RSK-175/SOP325



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## Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
<b>Lab ID: 1201034-06</b>							<b>Water - Sampled: 01/26/12 17:13</b>		
<b>Sample ID: HW14</b>							<b>Dissolved Gases by RSK-175</b>		
Ethene		ND	U	1.1	ug/L	B2A0080	01/31/12	01/31/12	RSK-175/SOP325
Surrogate: Acetylene			115 %	66.4-153%		"	"	"	
Surrogate: Acetylene	RE1		115 %	66.4-153%		B2B0006	02/01/12	02/01/12	
<b>Lab ID: 1201034-07</b>							<b>Water - Sampled: 01/26/12 08:31</b>		
<b>Sample ID: TB04</b>							<b>Dissolved Gases by RSK-175</b>		
Methane		8.8		1.2	ug/L	B2A0080	01/31/12	01/31/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			117 %	66.4-153%		"	"	"	
<b>Lab ID: 1201034-08</b>							<b>Water - Sampled: 01/26/12 08:34</b>		
<b>Sample ID: TB05</b>							<b>Dissolved Gases by RSK-175</b>		
Methane		5.0		1.2	ug/L	B2A0080	01/31/12	01/31/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			115 %	66.4-153%		"	"	"	
<b>Lab ID: 1201034-09</b>							<b>Water - Sampled: 01/27/12 09:40</b>		
<b>Sample ID: FB05</b>							<b>Dissolved Gases by RSK-175</b>		
Methane		3.7		1.2	ug/L	B2A0080	01/31/12	01/31/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			115 %	66.4-153%		"	"	"	
<b>Lab ID: 1201034-10</b>							<b>Water - Sampled: 01/25/12 16:31</b>		
<b>Sample ID: HW01</b>							<b>Dissolved Gases by RSK-175</b>		
Methane		12,000	C2, J	1.2	ug/L	B2B0032	02/08/12	02/08/12	RSK-175/SOP325
Ethane		350		1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			113 %	66.4-153%		"	"	"	
<b>Lab ID: 1201034-11</b>							<b>Water - Sampled: 01/27/12 13:18</b>		
<b>Sample ID: HW24-P</b>							<b>Dissolved Gases by RSK-175</b>		
Methane	RE1	630		4.8	ug/L	B2B0006	02/01/12	02/01/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	B2A0080	01/31/12	01/31/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene			114 %	66.4-153%		"	"	"	
Surrogate: Acetylene	RE1		111 %	66.4-153%		B2B0006	02/01/12	02/01/12	
<b>Lab ID: 1201034-12</b>							<b>Water - Sampled: 01/25/12 07:55</b>		



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## Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
<b>Lab ID: 1201034-12</b>						<b>Water - Sampled: 01/25/12 07:55</b>			
<b>Sample ID: TB02</b>						<b>Dissolved Gases by RSK-175</b>			
Methane		3.5	B1, J	1.2	ug/L	B2A0080	01/31/12	01/31/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		109 %		66.4-153%		"	"	"	
<b>Lab ID: 1201034-13</b>						<b>Water - Sampled: 01/25/12 08:00</b>			
<b>Sample ID: TB03</b>						<b>Dissolved Gases by RSK-175</b>			
Methane		2.3	B1, J	1.2	ug/L	B2A0080	01/31/12	01/31/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		111 %		66.4-153%		"	"	"	
<b>Lab ID: 1201034-14</b>						<b>Water - Sampled: 01/25/12 08:00</b>			
<b>Sample ID: TB07</b>						<b>Dissolved Gases by RSK-175</b>			
Methane		2.2	B1, J	1.2	ug/L	B2A0080	01/31/12	01/31/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		96 %		66.4-153%		"	"	"	
<b>Lab ID: 1201034-15</b>						<b>Water - Sampled: 01/27/12 11:40</b>			
<b>Sample ID: HW17</b>						<b>Dissolved Gases by RSK-175</b>			
Methane	RE1	3,300		19	ug/L	B2B0006	02/01/12	02/01/12	RSK-175/SOP325
Ethane		40		1.2	"	B2A0080	01/31/12	02/01/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		106 %		66.4-153%		"	"	"	
<i>Surrogate: Acetylene</i>		RE1	113 %	66.4-153%		B2B0006	02/01/12	02/01/12	
<b>Lab ID: 1201034-16</b>						<b>Water - Sampled: 01/27/12 12:09</b>			
<b>Sample ID: HW24</b>						<b>Dissolved Gases by RSK-175</b>			
Methane	RE1	740		4.8	ug/L	B2B0006	02/01/12	02/01/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	B2A0080	01/31/12	02/01/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		105 %		66.4-153%		"	"	"	
<i>Surrogate: Acetylene</i>		RE1	114 %	66.4-153%		B2B0006	02/01/12	02/01/12	
<b>Lab ID: 1201034-17</b>						<b>Water - Sampled: 01/27/12 08:05</b>			
<b>Sample ID: TB06</b>						<b>Dissolved Gases by RSK-175</b>			
Methane		2.7	B1, J	1.2	ug/L	B2A0080	01/31/12	02/01/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325



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**SDG:** 12030A

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## Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
<b>Lab ID: 1201034-17</b>							<b>Water - Sampled: 01/27/12 08:05</b>		
<b>Sample ID: TB06</b>							<b>Dissolved Gases by RSK-175</b>		
<i>Surrogate: Acetylene</i>			114 %	66.4-153%		B2A0080	01/31/12	02/01/12	



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## Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B2A0080 - RSK175 - Dissolved HC Gases

Prepared: 01/31/12 Analyzed: 02/01/12  
Dissolved Gases by RSK-175 - Quality Control

Blank (B2A0080-BLK1)

Methane	0.7	C1, J		1.2 ug/L						
Ethane	ND	U		1.2 "						
Ethene	ND	U		1.1 "						

Surrogate: Acetylene	77.8			"	66.5		117	66.4-153		
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LCS (B2A0080-BS1)

Methane	45.5			1.2 ug/L	44.1		103	70-130		
Ethane	89.8			1.2 "	83.2		108	77-137		
Ethene	82.8			1.1 "	78.3		106	78-138		

Surrogate: Acetylene	74.5			"	72.0		103	66.4-153		
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Batch B2B0006 - RSK175 - Dissolved HC Gases

Prepared & Analyzed: 02/01/12  
Dissolved Gases by RSK-175 - Quality Control

Blank (B2B0006-BLK1)

Methane	0.7	C1, J		1.2 ug/L						
Ethane	ND	U		1.2 "						
Ethene	ND	U		1.1 "						

Surrogate: Acetylene	72.6			"	66.5		109	66.4-153		
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LCS (B2B0006-BS1)

Methane	46.5			1.2 ug/L	44.1		105	70-130		
Ethane	91.5			1.2 "	83.2		110	77-137		
Ethene	85.7			1.1 "	78.3		110	78-138		

Surrogate: Acetylene	77.9			"	72.0		108	66.4-153		
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Batch B2B0032 - RSK175 - Dissolved HC Gases

Prepared & Analyzed: 02/08/12  
Dissolved Gases by RSK-175 - Quality Control

Blank (B2B0032-BLK1)

Methane	0.9	C1, J		1.2 ug/L						
Ethane	ND	U		1.2 "						
Ethene	ND	U		1.1 "						

Surrogate: Acetylene	78.5			"	66.5		118	66.4-153		
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LCS (B2B0032-BS1)

Methane	47.7			1.2 ug/L	44.1		108	70-130		200
Ethane	93.9			1.2 "	83.2		113	77-137		200
Ethene	88			1.1 "	78.3		112	78-138		200

Surrogate: Acetylene	79.2			"	72.0		110	66.4-153		
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## Qualifiers and Comments

J The reported result for this analyte should be considered an estimated value.

C2 The reported concentration for this analyte is above the calibration range of the instrument.

C1 The reported concentration for this analyte is below the quantitation limit.

B1 The concentration of this analyte found in this sample was less than five times the concentration found in the associated method blank.

U Not Detected

NR Not Reported

RE1, RE2, etc: Result is from a sample re-analysis.